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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/849,750	05/04/2001	David W. Jensen	00CR032/KE	2666

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Rockwell Collins, Inc.
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Cedar Rapids, IA 52498

EXAMINER

PATEL, JAYANTI K

ART UNIT	PAPER NUMBER
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2625

DATE MAILED: 02/19/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/849,750

Applicant(s)

JENSEN ET AL.

Examiner

Jayanti K. Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08).
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings filed on May 4, 2001 are approved.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schofield et al. (US 6,302,545) in view of Lemelson et al. (US 5,983,161).

Regarding claims 9 and 20, Schofield discloses a vehicle control system comprising:

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at least one image capture device for monitoring at least a portion of the system, the image capture device being capable to capture an image of the portion of the system being monitored (column 13, line 62 through column 14, line 10); an image processing assembly for processing the image captured by the image capture device (column 13, lines 42-65); a warning device for providing a warning to the user (column 14, lines 5-25); wherein the image processing assembly processes the image captured by the image capture device in real time for determining if the warning condition exist (column 44, lines 26-50).

Schofield discloses the image capture device capable of capturing an image of the warning system without specific details regarding such system.

In the same field of endeavor, however, Lemelson discloses a GPS vehicle collision avoidance warning and control system comprising an image capturing system capable of capturing the image of the portion of the system being monitored (column 14, lines 16-36).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system for capturing the image of the monitoring system as taught by Lemelson the vehicle control system of Schofield because Lemelson provides Schofield with a vehicle collision avoidance system which generates and displays potential collision hazards in real time basis with audible and visual warnings. Additionally, the systems similar that of instant application and Lemelson are routinely employed to reduce accidents and personal injuries as being evidenced by other prior art made of record in this office action.

As to claim 10, Schofield discloses the warning device comprising a display displaying the image captured by the image capturing device to the user (column 14, lines 6-15).

As to claim 11, Schofield discloses a memory for storing the reference portion of the image (column 19, lines 11-31). All other limitations of claim 11 are similarly analyzed as claims 9-11 above.

As to claim 12, Schofield discloses an image processing assembly that compares the captured image with the reference image (abstract, lines 1-10).

As to claim 13, Schofield discloses image capture device comprising a video camera, wherein the captured image being comprised of at least one of a continuous video and sampled frames of a continuous video (column 29, lines 42-60).

As to claim 14, Schofield discloses an image processing assembly monitoring a second warning system capable of detecting if the warning condition exists (column 14, lines 6-25).

As to claims 15-18, while Schofield is silent about specific details regarding monitoring landing gear, wing, tire and engine, Lemelson discloses a GPS vehicle collision avoidance system comprising a monitoring system that monitors landing gear, wing, tire and engine area of the vehicle (column 2, lines 10-65).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system for capturing the image of the monitoring system including landing gear, wing or engine as taught by Lemelson the vehicle control system of Schofield because Lemelson provides Schofield with a vehicle

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collision avoidance system which generates and displays potential collision hazards in real time basis with audible and visual warnings. Additionally, the systems similar that of instant application and Lemelson are routinely employed to reduce accidents and personal injuries as being evidenced by other prior art made of record in this office action.

As to claim 19, Schofield discloses a warning system comprising an secured area and the warning condition comprising an authorized presence in the region (column 44, lines 52-67).

As to claims 1-8, the steps claimed as method is nothing more than restating the function of the specific components of the apparatus as claimed above and therefore, it would have been obvious, considering the aforementioned rejection for the apparatus claims 9-19.

Other prior art cited

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ando (US 5,008,946) discloses an automobile control system (figure 1a).

Nakamura (US 6,314,364) discloses a mobile interactive workstation assisting operator of a vehicle.

Cooperman et al. (US 5,366,376) discloses a driver training system with performance data feedback.

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Ryan (US 5,313,201) discloses a vehicular display system including a three-dimensional representation of moving vehicle.

Kelley (US 4,878,050) discloses a motor vehicle remote control system.

Sumiya et al. (US 4,712,635) discloses a control system for four-wheel drive vehicle.

Barton (US 4,630,109) discloses a vehicle tracking system for determining the lateral position of a moving vehicle.

Yang (US 4,578,665) discloses a remote controlled surveillance train car.

Wilson-Jones et al. (US 5,765,116) discloses a driver assistance system for a vehicle.

Seo (US 6,014,608) discloses a system capable for sensing the peripheral situation of a vehicle.

Summer (US 5,173,691) discloses a data fusion process for an in-vehicle traffic congestion information system.

Borcherts et al. (US 5,245,422) discloses a system for automatically steering a vehicle within a lane in the road.

Marshall et al. (US 5,530,421) discloses a circuit for automated control of on-board closed circuit television system having side and rear view cameras.

Fujita (US 5,485,892) discloses a drive control system for automobile.

Risack et al. ("A Video-based Lane Keeping Assistant", IEEE Intelligent Vehicles Symposium 2000, Oct. 3-5, 2000, pages 356-361) discloses a lane keeping assistance system.

Gavrila et al. ("A multi-sensor Approach for the Protection of Vulnerable Traffic Participants - the PROTECTOR Project", IEEE Instrumentation and Measurement Technology Conference, Budapest Hungary, May 21-23, 2001, pages 2044-2048) discloses an E. U. project PROTECTOR regarding lane detection and vehicle recognition.

Altan et al. ("Computer Architecture and Implementation of Vision-Based Real-Time Lane Sensing", Intelligent Vehicles '92 Symposium. June 29-July 1, 1999, pages 202-206) discloses a lane sensing and detection system.

Contact information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jayanti K. Patel whose telephone number is (703) 308-7728. The examiner can normally be reached on Monday-Friday (7:00-4:00), alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (703) 308-5246. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JKP



Jayanti K. Patel
Primary Examiner

February 17, 2004